Proposed Item for Biobased Designation

The following biobased product information has been collected to support item designation by USDA for the BioPreferred Program. This summary reflects data available as of May 14, 2009.

Title: Deodorant

Description: A product often combined with antiperspirant, for inhibiting or masking perspiration and other body odors.

Companies Supplying Item: 23 companies supplying Deodorants have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

Industry Associations Investigated: The following industry associations have been investigated for member companies supplying Deodorants:

- United Soybean Board Association
- National Corn Growers Association

Commercially Available Products Identified: Of the companies identified, 56 Deodorants are commercially available on the market.

Product Information Collected: Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 9 Deodorants.

Industry Performance Standards: Product information submitted by biobased manufacturers and suppliers indicate that have typically been tested to the following industry standards:

- none

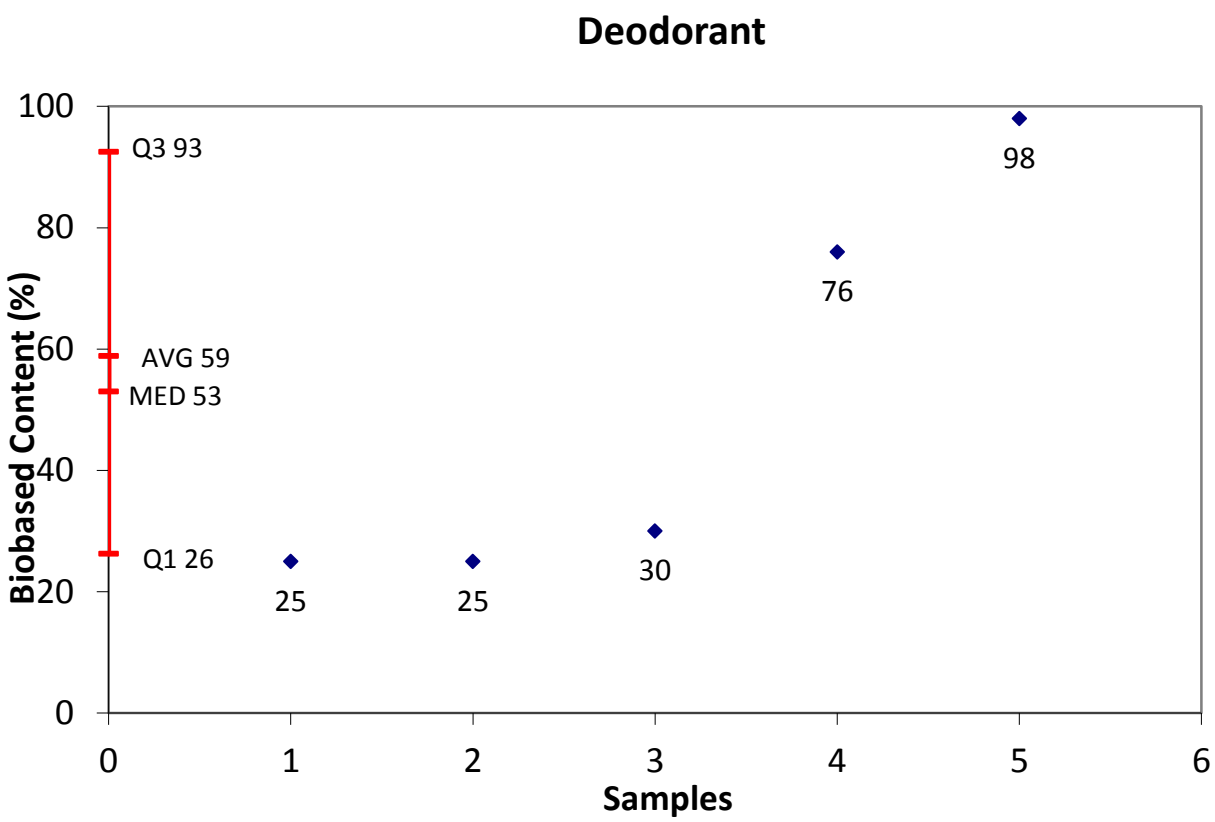
Samples Tested for Biobased Content: 6 samples of Deodorants have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866.

Biobased Content Data: Results from biobased content testing of Deodorants indicate a range of content percentages from 25 minimum to 99 maximum biobased content as defined by ASTM D6866. A detailed distribution of biobased content levels is included as Appendix A.

Products Submitted for BEES Analysis: Life-cycle cost and environmental effect data for 1 Deodorants have been submitted to NIST for BEES analysis.

BEES Analysis: The life-cycle cost of the submitted Deodorants is $20.03 per usage unit. The environmental score is 0.0340. A detailed summary of the BEES results is included as Appendix B.

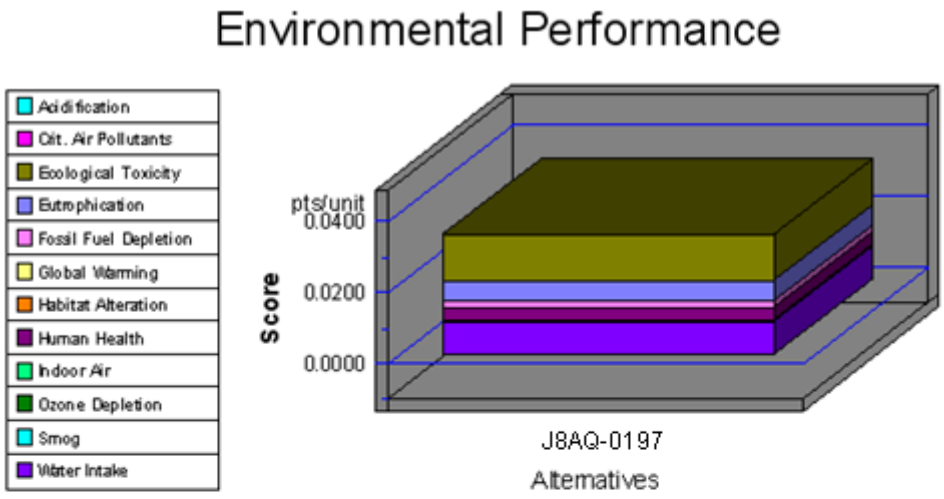
Appendix A - Biobased Content Data



	Company	Product	C14	BEES
1	J8AQ	J8AQ-0200	25	
2	J8AQ	J8AQ-0197	25	Yes
3	Y31Y	Y31Y-0002	30	
4	J8AQ	J8AQ-0201	76	
5	D8TH	D8TH-0002	98	
6	D8TH	D8TH-0001	99	

Appendix B - BEES Analysis Results

Functional Unit: 1 pound



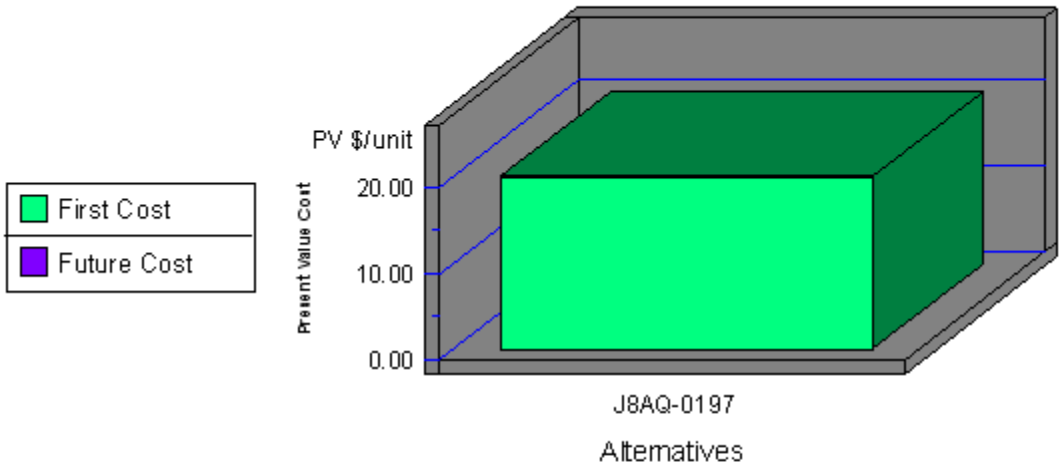
Note: Lower values are better

Category	J8AQ-0197
Acidification--3%	0.0000
Crit. Air Pollutants--9%	0.0002
Ecolog. Toxicity--7%	0.0130
Eutrophication--6%	0.0056
Fossil Fuel Depl.--10%	0.0018
Global Warming--29%	-0.0001
Habitat Alteration--6%	0.0000
Human Health--13%	0.0035
Indoor Air--3%	0.0000
Ozone Depletion--2%	0.0000
Smog--4%	0.0007
Water Intake--8%	0.0093
Sum	0.0340

Deodorants		
Impacts	Units	J8AQ-0197
Acidification	millimoles H^+ equivalents	1.62E+03
Criteria Air Polutants	microDALYs	3.85E-01
Ecotoxicity	g 2,4-D equivalents	1.51E+02
Eutrophication	g N equivalents	1.81E+01
Fossil Fuel Depletion	MJ surplus energy	6.25E+00
Global Warming	g CO_2 equivalents	-1.32E+02
Habitat Alteration	T&E count	0.00E+00
Human Health--Cancer	g C_6H_6 equivalents	2.17E+00
Human Health--NonCancer	g C_7H_8 equivalents	5.50E+03
Indoor Air Quality	g TVOCs	0.00E+00
Ozone Depletion	g CFC-11 equivalents	3.94E-05
Smog	g NO_x equivalents	2.53E+01
Water Intake	liters of water	6.13E+02
Functional Unit	----------	1 pound

1 Following are more complete descriptions of units: Acidification: millimoles of hydrogen ion equivalents; Criteria Air Pollutants: micro Disability-Adjusted Life Years; Ecological Toxicity: grams of 2,4-dichlorophenoxy-acetic acid equivalents; Eutrophication: grams of nitrogen equivalents; Fossil Fuel Depletion: megajoules of surplus energy; Global Warming: grams of carbon dioxide equivalents; Habitat Alteration: threatened and endangered species count;Human Health-Cancer: grams of benzene equivalents; Human Health-NonCancer: grams of toluene equivalents; Indoor Air Quality: grams of Total Volatile Organic Compounds; Ozone Depletion: grams of chloroflourocarbon-11 equivalents; Smog: grams of nitrogen oxide equivalents; and Water Intake: liters of water.

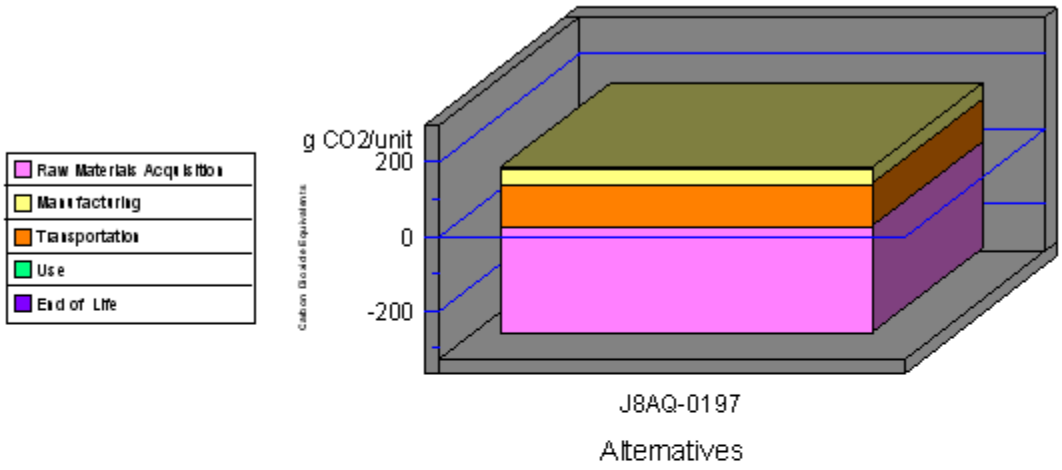
Economic Performance



Category	J8AQ-0197
First Cost	20.03
Future Cost– 3.0%	0.00
Sum	20.03

*This is a consumable product. Therefore, future costs are not calculated.

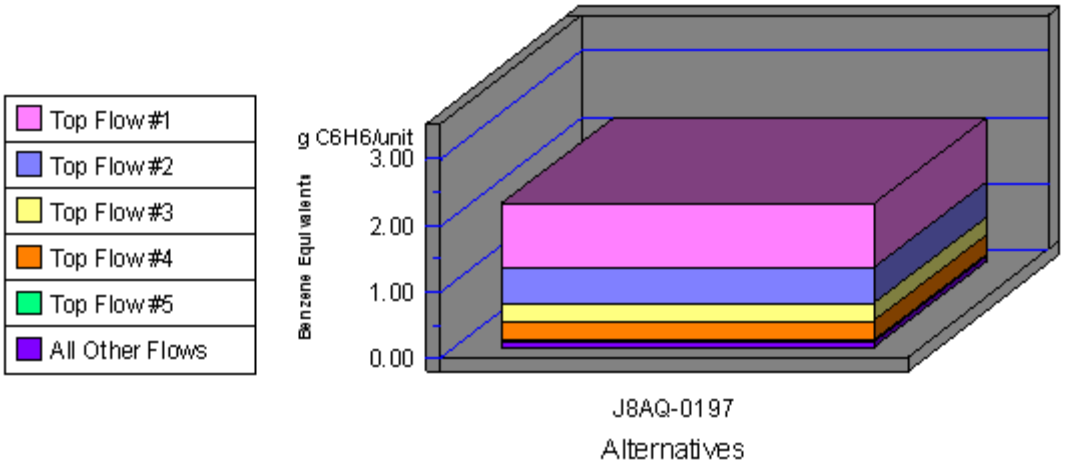
Global Warming by Life-Cycle Stage



Note: Lower values are better

Category	J8AQ-0197
1. Raw Materials	-289
2. Manufacturing	45
3. Transportation	112
4. Use	0
5. End of Life	0
Sum	-132

Human Health Cancer by Sorted Flows*

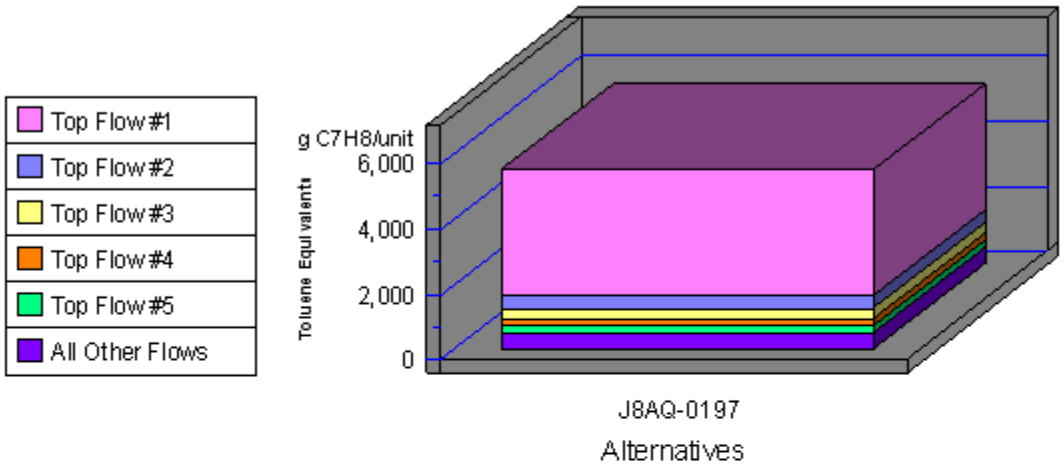


Note: Lower values are better

Category	J8AQ-0197
Cancer--(w) Arsenic (As3+,	0.95
Cancer--(w) Phenol (C6H5OH)	0.53
Cancer--(a) Arsenic (As)	0.28
Cancer--(a) Dioxins (unspecifie	0.28
Cancer--(a) Bromoxynil	0.04
All Others	0.08
Sum	2.17

*Sorted by five topmost flows for worst-scoring product

Human Health Noncancer by Sorted Flows*



Note: Lower values are better

Category	J8AQ-0197
Noncancer–(a) Mercury (Hg)	3,874.72
Noncancer--(a) Dioxins (unspeci	350.71
Noncancer--(a) Lead (Pb)	347.07
Noncancer–(w) Mercury (Hg+,	206.62
Noncancer--(w) Barium (Ba++)	187.76
All Others	537.01
Sum	5,503.89

*Sorted by five topmost flows for worst-scoring product